

## A Cross-Sectional Survey to Assess the Knowledge and Attitude Regarding Dyslexia among Teachers at Selected Schools, Punjab

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### ABSTRACT

India is home to the largest number of children in the world, significantly larger than the number in China. The country has around 30 percent of the 0-14 years child population. Teachers play a very significant role of children's life and schools are vital platform of every child. In this present study a cross-sectional descriptive survey was conducted to assess the knowledge and attitude regarding dyslexia among teachers at selected schools, Punjab. This study was conducted at 10 selected schools according to researcher's convenient. Study sample were 110 teachers who were recruited through convenience sampling technique who had fulfil inclusion and exclusion criteria. Ethical clearance was taken from the research and ethical committee of the SGL nursing college, Jalandhar. Result of study has shown that knowledge level regarding dyslexia among teachers. They had 39 (35.5%) average knowledge, 32(29.1%) had below average, 30(27.3%) had good and very few of them had 9(8.2%) excellent knowledge. This study showed that attitude of teachers regarding dyslexia on various level of five point of likert scale. Study found that highly significant association between level of knowledge and socio-demographic variables i.e. age, qualification, teaching experience, marital status, areas of residence, religion and source of information p-value <0.001.

**Key Words:** teachers, dyslexia, knowledge level, attitude

### INTRODUCTION

Reading and writing are necessary skills for everyday functioning. Unfortunately, a small percentage of people

do not succeed in developing these skills to an adequate level. When the failure to automate these skills cannot be attributed to dysfunctions in intellectual, sensory or emotional abilities, or to inadequate instruction, the presence of a specific learning disorder or dyslexia is suspected.

Learning refers to the highest and most complex cognitive function of the brain and it should be of no surprise that many children (as many as 5-10% worldwide) have problems acquiring the basics of reading, writing, and mathematics. Many children in first and second grade just need some more time to acquire these basic skills. [1]

Specific reading and spelling disorders occurs in about 4% of 8-10 years old children. In reading; there may be difficulties in recognition, oral reading skills (omissions, substitutions, distortions, slow rate, false starts, long hesitations, comprehensions, skill (inability to recall, to draw conclusion and inferences and to use general knowledge as background information) decoding and performance of tasks requiring reading. [2] In writing; child cannot combine auditory or visual verbal information into motor action needed for writing other factors that influence writing are attention, language, memory, visuomotor, audiverbal, bisuverbal and combined processing deficits. This problem is known as developmental dysgraphia. [3]

Dyslexia is defined as a specific and significant impairment in reading ability that cannot be explained by deficits in intelligence, learning opportunity,

motivation or sensory acuity. It can occur in areas of basic reading skills, written expression, listening and speaking. It has great wide effect on children involving aspects such as education, career, communication and even health. The importance of research in dyslexia has been well known by educational, medical and social researchers. [4]

Over the last decade; awareness about this invisible handicap has grown in India. Once specific learning disability is recognized as a disability by the Government of India, these children with the backing of the Right to Education Act, would be able to benefit significantly. [5] Prevalence of dyslexia is estimated to be between 5% and 17% of school aged children in India. [6] One study conducted on dyslexic screening on 463 students at Bikaner. The students were Class III to V. The study results showed that 48 students (10.2%) were labelled as dyslexic. [7]

A cross-sectional multi-staged stratified randomized cluster sampling study was conducted among children aged 8-11 years from third and fourth standard. The study results revealed that the prevalence of specific learning disabilities was 15.17% in sampled children, whereas 12.5%, 11.2% and 10.5% had dysgraphia, dyslexia and dyscalculia respectively. [8] Learning difficulties are problems that affect the brain's ability to receive process, analyze, or store information. [9] The teachers 'attitude and high level of awareness about learning disabilities make the timely diagnosis of this disorder possible. [10]

### Objectives:

1. To assess the knowledge and attitude regarding dyslexia among teachers.
2. To find out the association between the knowledge of dyslexia among teachers with selected socio-demographic variables.

**Assumption:** Teachers have various levels of knowledge and attitude regarding dyslexia.

## MATERIALS AND METHODS

The quantitative research approach was adopted. The research design was descriptive cross-sectional survey. Study population comprised of teachers who were working in selected schools (Govt. & Pvt.) at Jalandhar and Phagwara. This study was conducted at 10 selected schools according to researcher's Convenient. Study sample were 110 teachers who were recruited through Convenience sampling technique who had fulfil inclusion and exclusion criteria. Ethical clearance was taken from the Research and Ethical Committee of the SGL Nursing College, Jalandhar. A written permission was taken from the authorized person at schools. Research tool consisted of three parts; part-I Socio-demographic profile, part-II structured knowledge questionnaires on dyslexia which contains 28 multiple choice questions and part-III structured attitude scale (5 point likert scale) on dyslexia which contains 13 items. The criterion measure used in the study was extent of score on level of knowledge. Maximum obtainable score was 28 and divided into four levels like excellent: 22-28, Good: 15-21, Average: 8-14 and Below average:  $\leq 7$ . One mark was given for right answer and zero mark given for wrong answer. The research tools were prepared from various review of literature and validated by experts from the field of pediatric nursing, psychiatric nursing, clinical psychologist, paediatrician, psychiatrist and psychiatric social workers etc. Prior information and informed consent was obtained from each study sample. Anonymity and confidentiality of sample was maintained. Reliability of the tool was .821 as calculated by Cronbach's Alpha. The data was collected from 5th February 2013 to 30<sup>th</sup> April 2013. The data was analyzed using the descriptive and inferential statistics. Analysis was carried out with the help of SPSS version 16.

## RESULTS

Results shows that (40.0%) of teachers were in age group of 21-30years

and followed by (34.5%) were from 31-40 years, (20.0%) were from 41-50 years age and out of 110 only few were (5.5%) in age >50 years. As per gender, majority of teachers (69.1%) were males and followed by (30.9) were female. According to qualification; majority of teachers (60.0%) were ETT (Elementary teaching Training) and followed by (26.4%) were B.Ed. and (13.6%) were NTT (Nursery Teaching Training). As per teaching experiences it was revealed that majority of them (40.0%) had 4-6 years experience and followed by (31.8%) had more than 6 years experience, (15.5%) had 2-4 year & remain (12.7%) had less than 2 year experience. In context of marital status mostly (82.7%) married and (17.3%) were unmarried. Majority of teachers belong to urban (64.5%) and followed by rural (35.5%). As per religion half of them were Sikh (50%), Hindu (39.1%) and Christian (10.9%). Most of the teachers had source of information by newspaper and seminar/conference (34.5% & 30%), few of them had by mass media (11.8%) and others (23.6%) were having no

information regarding dyslexia. As per schools, majority of teachers (71.8%) were from Govt. Schools and (28.2%) were from Pvt. schools.

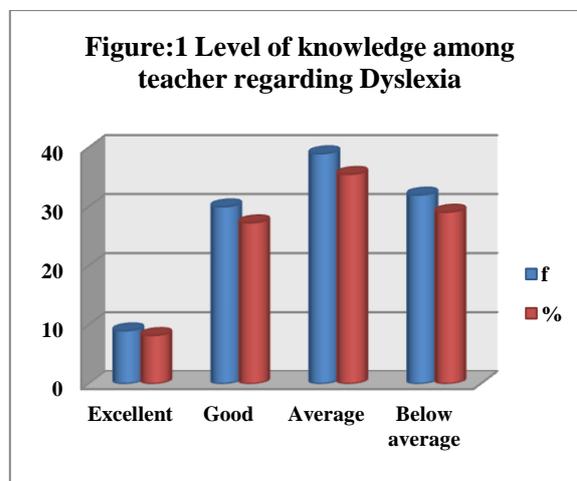


Figure:1 Reflect that knowledge level regarding dyslexia among teachers. They had 39 (35.5%) average knowledge, 32(29.1%) had below average, 30(27.3%) had good and very few of them had 9(8.2%) excellent knowledge.

Table:1 Subtotal knowledge score among teachers regarding Dyslexia. N=110

Sr. No.	Questions	Mean ± SD
1.	Which problem is generally due to learning disability?	.67 ±.471
2.	What do you mean by the term dyslexia?	.54 ±.501
3.	What is dysgraphia?	.29 ±.456
4.	What is dysphasia?	.38 ±.488
5.	How you can define dyslexia?	.69 ±.464
6.	Why dyslexia is known to be hidden disability?	.69 ±.464
7.	In which age dyslexia is more common?	.81 ±.395
8.	What is morphological awareness?	.25 ±.438
9.	What is spoonerism?	.58 ±.496
10.	What is the main cause of dyslexia?	.37 ±.486
11.	What do you mean by primary dyslexia?	.29 ±.456
12.	What is main cause of developmental or secondary dyslexia?	.29 ±.456
13.	Which type of deficiency dyslexic children have?	.85 ±.354
14.	Which symptom child show in the phonological dyslexia?	.83 ±.380
15.	What is/are myths believed by the people related to dyslexia?	.82 ±.387
16.	Which difficulty shows the clue of dyslexia?	.36 ±.483
17.	What can be complication due to dyslexia in later life?	.36 ±.483
18.	Who can judge and help the suspected child with dyslexia?	.36 ±.483
19.	Which is the effective method for identifying the dyslexic child?	.38 ±.488
20.	What would to be identified in a dyslexic child?	.32 ±.468
21.	Which teaching principles should be carried out for dyslexic child?	.27 ±.447
22.	What do you mean by co-genitive process?	.24 ±.427
23.	What score of dyslexic child should be considered at risk?	.24 ±.427
24.	How teachers and parents can help the dyslexic students?	.22 ±.415
25.	How paired reading will be beneficial for the dyslexic child?	.25 ±.438
26.	How can the dyslexic child have a positive impact in his development and learning?	.25 ±.432
27.	What are mastery models?	.24 ±.427
28.	What would be the best management for dyslexic child?	.26 ±.443

Table:1 presents that item wise analysis of subtotal knowledge score among teachers regarding Dyslexia. All items show knowledge score in mean ±SD.

**Table:2 Attitude towards dyslexia among teachers. N=110**

Sr. No.	Response	Respondents Response in %				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	I think dyslexia is a myth	00	00	65.5	34.5	00
2.	The word 'dyslexia' is really just an excuse for laziness	00	23.6	6.4	56.4	13.6
3.	Dyslexic Students often do not succeed as adults	5.5	12.7	30.0	33.6	18.2
4.	Dyslexic students have low ability	00	00	8.2	43.6	48.2
5.	Dyslexic students have below average intelligence	00	00	8.2	43.6	48.2
6.	Dyslexia is a learning disability that affect language processing	00	10.0	72.7	10.9	6.4
7.	Dyslexia is a hereditary	10.9	13.6	22.7	34.5	18.2
8.	Physician can prescribe medication to help for dyslexic student	10.9	18.2	22.7	30.0	18.2
9.	Teacher cannot improve the dyslexic student	10.9	13.6	32.7	24.5	18.2
10.	Multisensory instruction can be useful for student with dyslexia to learn	10.9	18.2	32.7	20.0	18.2
11.	Dyslexia is caused by a poor home environment/poor reading instruction.	10.9	11.8	16.4	28.2	32.7
12.	I feel more training should be given to teachers about dyslexia	4.5	5.5	8.2	45.5	36.4
13.	All classes should be dyslexic friendly	10.9	8.2	7.3	40.9	32.7

**Table: 3 Association between level of Knowledge regarding Dyslexia with selected demographic variables. N=110**

Sr. No.	Socio-demographic Variables	level of Knowledge				$\chi^2$ Value	df	p-value
		Excellent	Good	Average	Below average			
1.	<b>Age (In years)</b>							
	21-30	6	8	18	12			
	31-40	0	5	13	20	37.933	9	.000**
	41-50	3	13	6	0			
	>50	0	4	2	0			
2.	<b>Gender</b>							
	Male	4	23	27	22	3.368	3	.338 <sup>NS</sup>
	Female	5	7	12	10			
3.	<b>Qualification</b>							
	NTT	0	12	3	0			
	ETT	7	11	22	26	29.792	6	.000**
	B. Ed	2	7	14	6			
4.	<b>Teaching Experience (In years)</b>							
	<2	5	0	5	4			
	2-4	0	0	11	6	54.295	9	.000**
	4-6	3	14	6	21			
	>6	1	16	17	1			
5.	<b>Marital Status</b>							
	Married	4	30	29	28	17.916	3	.000**
	Unmarried	5	0	10	4			
6.	<b>Area of Residence</b>							
	Rural	5	0	17	17	23.562	3	.000**
	Urban	4	30	22	15			
7.	<b>Religion</b>							
	Sikh	5	5	19	26			
	Hindu	4	22	11	6	36.407	6	.000**
	Christian	0	3	9	0			
8.	<b>Source of Information</b>							
	Newspaper	6	6	16	10			
	Seminar/Conference	3	8	11	11	42.876	9	.000**
	Mass Media	0	2	0	11			
	None	0	14	12	0			

NB: \*\* (Highly significant p-value <0.001), NS (Non-significant p-value>0.05)

Table:2 show that attitude of teachers regarding dyslexia. Majority of teachers (65.5%) had *neutral* attitude that 'I think dyslexia is a myth'.(56.4%) were *agree* on 'The word 'dyslexia' is really just an excuse for laziness'.(33.6%) teachers were *agree* that 'Dyslexic Students often do not succeed as adults'.(48.2%) were *strongly agree* that 'Dyslexic students have low ability' and same attitude on 'Dyslexic

students have below average intelligence.' (72.2%) teachers had *neutral response* that 'Dyslexia is a learning disability that affects language processing'. (34.5%) were given *strongly agree* response on 'Dyslexia is a hereditary.'(30.0%) had *agree* on 'Physician can prescribe medication to help for dyslexic student'. (37.7%) were in *neutral response* on 'Teacher cannot improve the dyslexic student' and same response

(32.7%) was on 'Multisensory instruction can be useful for student with dyslexia to learn.' (32.7%) were *strongly agree* response on Dyslexia is caused by a poor home environment/poor reading instruction'. (45.5%) had *agree* response on 'I feel more training should be given to teachers about dyslexia'. (40.9%) teachers were given *agree* response on 'All classes should be dyslexic friendly'

Table:3 reveals that association between level of knowledge regarding dyslexia with selected demographic variables. Age, qualification, teaching experience, marital status, areas of residence, religion and source of information variables are highly significant here calculated  $\chi^2$  value > tabulated  $\chi^2$  value at level of significant p-value <0.001. One variable is not significant i.e. gender here  $\chi^2$  value < tabulated  $\chi^2$  value at level of significant p-value >0.05.

## DISCUSSION

This study was conducted to assess knowledge and attitude regarding dyslexia among teachers at selected schools, Punjab. The results revealed that 39 (35.5%) had average knowledge, 32(29.1%) had below average, 30(27.3%) had good and very few of them had 9(8.2%) excellent knowledge. Whereas teacher's attitude showed regarding dyslexia on various levels as per likert scale strongly disagree, disagree, neutral, agree and strongly agree. Similar study was conducted by **Shethy A, Rai BS** on awareness and knowledge of dyslexia among elementary school teachers in India. This study was conducted on 314 teachers from 32 schools and found 262 teachers were 'aware' of the term dyslexia, only 24 teachers had prior training. Only 1 in 3 teachers had adequate knowledge of dyslexia. [11]

The findings of the present study showed that age, qualification, teaching experience, marital status, areas of residence, religion and source of information variables are highly significant here calculated  $\chi^2$  value > tabulated  $\chi^2$  value

at level of significant p-value <0.001. One variable is not significant i.e. gender here  $\chi^2$  value < tabulated  $\chi^2$  value at level of significance p-value >0.05. Similar study supported by **Garg S. Pandya A, Ravindra HN** on knowledge of primary school teachers regarding selected common behavioural problems of children. They found the results all socio-demographic variables were non-significant i.e. age, gender, educational qualification, teaching experiences, religion here p- value is more than 0.05 and calculated  $\chi^2$  value < tabulated  $\chi^2$  value. [12]

## CONCLUSION

The present study concludes that teachers had 39 (35.5%) average knowledge, 32(29.1%) had below average, 30(27.3%) had good and very few of them had 9(8.2%) excellent knowledge. It showed that attitude of teachers regarding dyslexia on various level of five point of likert scale. it determines whether educator's beliefs are situated negatively or positively towards the construct of dyslexia. They can give quality of education to their students. So, teachers also need to add this topic in curriculums while they go under teaching training.

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